Week 4 Deployment on Flask

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Batch Code: LISUM01

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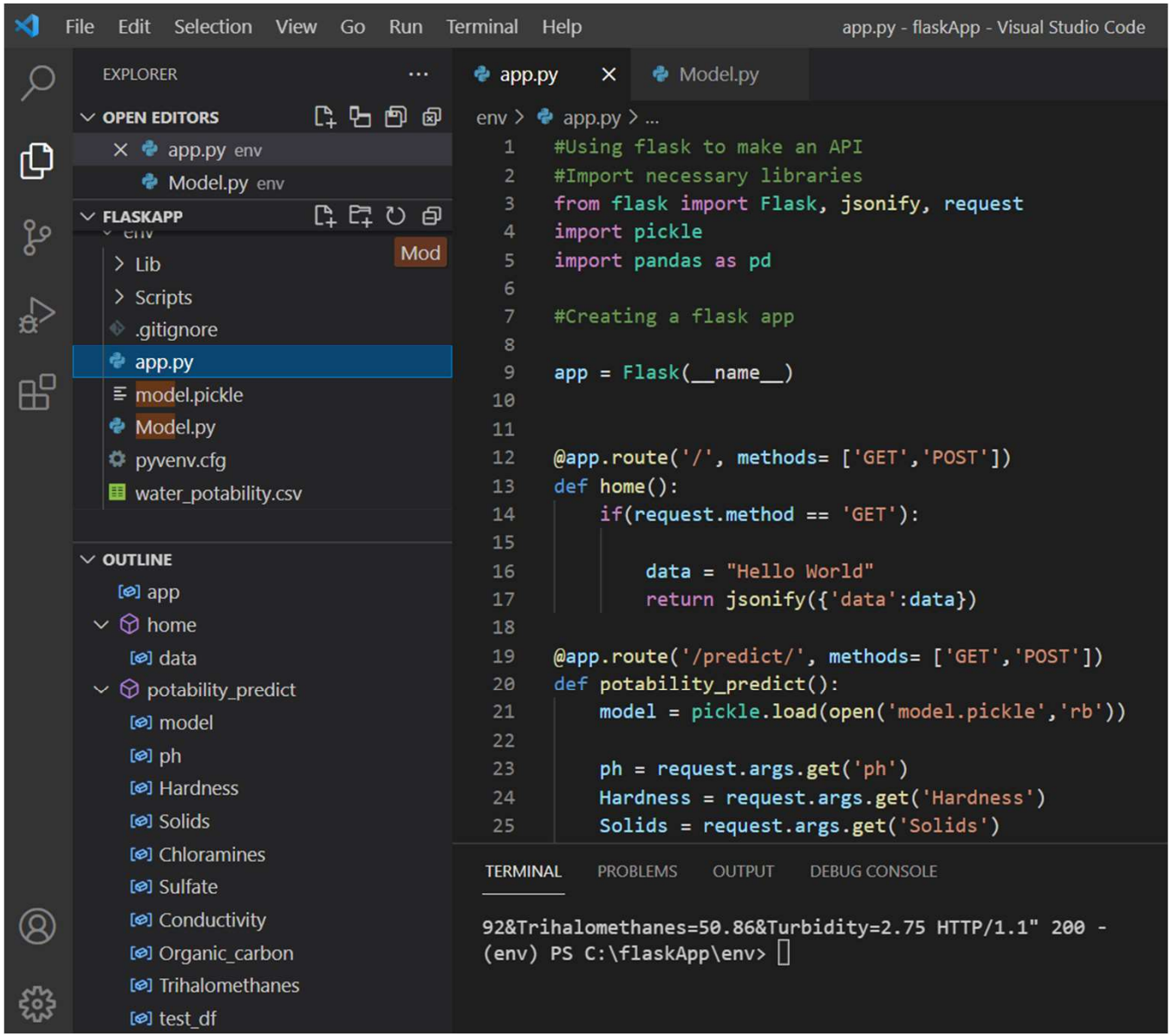
submitted to Github

Data Source

https://www.kaggle.com/adityakadiwal/water-potability

Data file name

water_potability.csv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potability_predict
model
ph
Hardness
Solids
Chloramines
Sulfate
Conductivity
Organic_carbon
Trihalomethanes
test_df
app.py
Model.py
env > app.py > ...
#Using flask to make an API
#Import necessary libraries
from flask import Flask, jsonify, request
import pickle
import pandas as pd
#Creating a flask app
app = Flask(__name__)
@app.route('/', methods= ['GET','POST'])
def home():
if(request.method == 'GET'):
data = "Hello World"
return jsonify({'data':data})
@app.route('/predict/', methods= ['GET','POST'])
def potability_predict():
model = pickle.load(open('model.pickle','rb'))
ph = request.args.get('ph')
Hardness = request.args.get('Hardness')
Solids = request.args.get('Solids')
TERMINAL
PROBLEMS
OUTPUT
DEBUG CONSOLE
92&Trihalomethanes=50.86&Turbidity=2.75 HTTP/1.1" 200 -
(env) PS C:\flaskApp\env>

app.py | Model.py

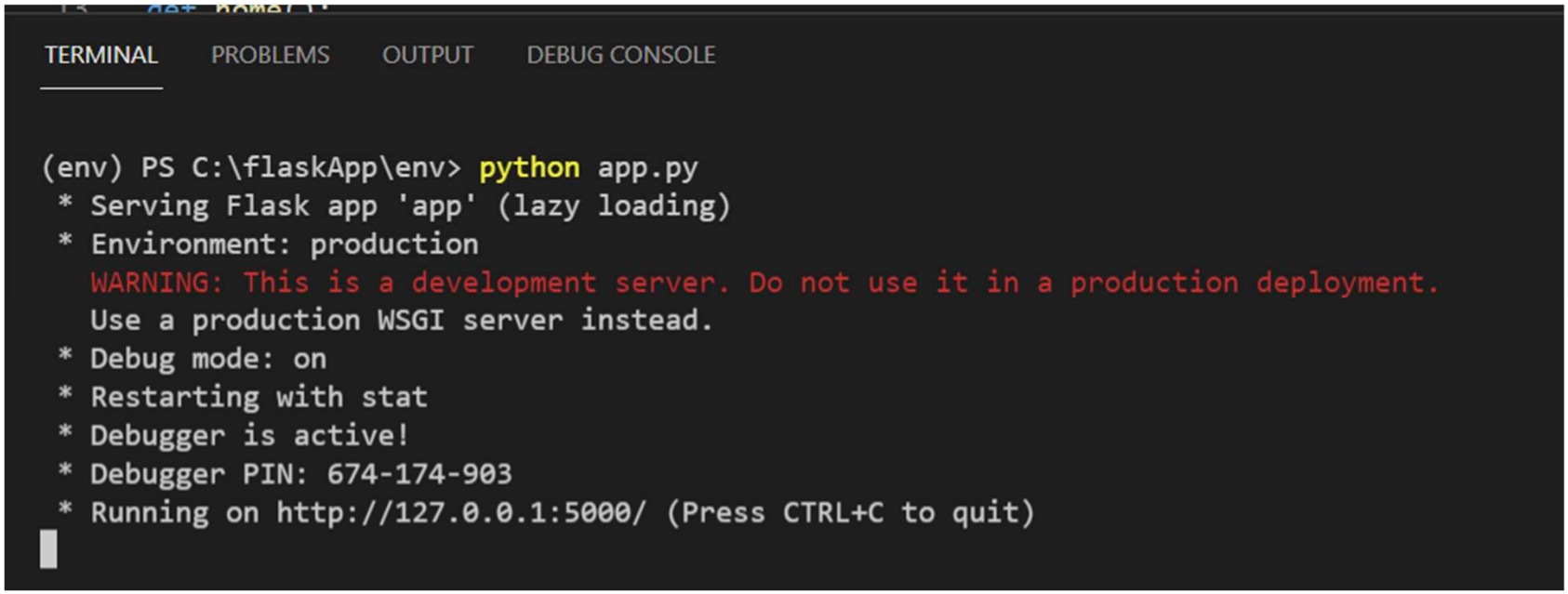
env > Model.py > ...

```python

# Importing the libraries
import pandas as pd
import pickle
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split

# Importing the dataset
dataset = pd.read_csv('water_potability.csv')

dataset = dataset.dropna()


X=dataset[['ph','Hardness','Solids','Chloramines','Sulfate','Conductivity','Organic_carbon','Trihalomethanes' ]]
y = dataset['Potability']

# Splitting the dataset into the Training set and Test set

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.25, random_state = 101)

regressor = LinearRegression()

regressor.fit(X_train,y_train)


pickle.dump(regressor,open('model.pickle','wb'))
```

env > app.py > ...

```python

#Creating a flask app

app = Flask(__name__)


@app.route('/', methods= ['GET','POST'])
def home():
    if(request.method == 'GET'):

        data = "Hello World"
        return jsonify({'data':data})

@app.route('/predict/', methods= ['GET','POST'])
def potability_predict():
    model = pickle.load(open('model.pickle','rb'))

    ph = request.args.get('ph')
    Hardness = request.args.get('Hardness')
    Solids = request.args.get('Solids')
    Chloramines = request.args.get('Chloramines')
    Sulfate = request.args.get('Sulfate')
    Conductivity = request.args.get('Conductivity')
    Organic_carbon = request.args.get('Organic_carbon')
    Trihalomethanes = request.args.get('Trihalomethanes')

    test_df = pd.DataFrame({'ph':[ph],'Hardness':[Hardness],'Solids':[Solids],'Chloramines':[Chloramines],'Sulfate':[Sulfate]
    ,'Conductivity':[Conductivity],'Organic_carbon':[Organic_carbon],'Trihalomethanes':[Trihalomethanes]})

    pred_potability = model.predict(test_df)
    return jsonify({'Water Potability':str(pred_potability)})

# Driver function
if __name__ == '__main__':
    app.run(debug=True)
```

Application Deployment



Testing using postman